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08/449,097	05/24/95	HARVEY	J 5634.208

LM11/0402

EXAMINER

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ART UNIT	PAPER NUMBER
2737	AQ

DATE MAILED: 04/02/98

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 08/449,097	Applicant(s) HARVEY et al.
	Examiner Andrew Faile	Group Art Unit 2737

Responsive to communication(s) filed on Jan 27, 1997

This action is **FINAL**.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire THREE month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

Claim(s) 2-55 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

Claim(s) _____ is/are allowed.

Claim(s) 2-55 is/are rejected.

Claim(s) _____ is/are objected to.

Claims _____ are subject to restriction or election requirement.

Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on _____ is/are objected to by the Examiner.

The proposed drawing correction, filed on _____ is approved disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All Some* None of the CERTIFIED copies of the priority documents have been

received.

received in Application No. (Series Code/Serial Number) _____.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

1. This Office Action is responsive to the amendment(s) filed 1/27/97.

DOUBLE PATENTING V.S. PATENTS

2. After reviewing the restriction requirement under 35 USC 121 in US Patent 5,233,654 it is believed that the claims of the instant application are subject to a double patenting analysis against US Patent 5,233,654 and US Patent 5,335,277.
3. In view of further analysis and applicant's arguments, the rejection of the claims in the instant application under double patenting based on the broad analysis of *In re Schneller* as set forth in paragraphs 7-10 of the previous Office Action has been withdrawn.

DOUBLE PATENTING BETWEEN APPLICATIONS

4. Conflicts exist between claims of the following related co-pending applications which includes the present application:

#	Ser. No.	#	Ser. No.	#	Ser. No.
1	397371	2	397582	3	397636

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4	435757	5	435758	6	437044
7	437045	8	437629	9	437635
10	437791	11	437819	12	437864
13	437887	14	437937	15	438011
16	438206	17	438216	18	438659
19	439668	20	439670	21	440657
22	440837	23	441027	24	441033
25	441575	26	441577	27	441701
28	441749	29	441821	30	441880
31	441942	32	441996	33	442165
34	442327	35	442335	36	442369
37	442383	38	442505	39	442507
40	444643	41	444756	42	444757
43	444758	44	444781	45	444786
46	444787	47	444788	48	444887
49	445045	50	445054	51	445290
52	445294	53	445296	54	445328
55	446123	56	446124	57	446429
58	446430	59	446431	60	446432
61	446494	62	446553	63	446579

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64	447380	65	447414	66	447415
67	447416	68	447446	69	447447
70	447448	71	447449	72	447496
73	447502	74	447529	75	447611
76	447621	77	447679	78	447711
79	447712	80	447724	81	447726
82	447826	83	447908	84	447938
85	447974	86	447977	87	448099
88	448116	89	448141	90	448143
91	448175	92	448251	93	448309
94	448326	95	448643	96	448644
97	448662	98	448667	99	448794
100	448810	101	448833	102	448915
103	448916	104	448917	105	448976
106	448977	107	448978	108	448979
109	449097	110	449110	111	449248
112	449263	113	449281	114	449291
115	449302	116	449351	117	449369
118	449411	119	449413	120	449523
121	449530	122	449531	123	449532

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124	449652	125	449697	126	449702
127	449717	128	449718	129	449798
130	449800	131	449829	132	449867
133	449901	134	450680	135	451203
136	451377	137	451496	138	451746
139	452395	140	458566	141	458699
142	458760	143	459216	144	459217
145	459218	146	459506	147	459507
148	459521	149	459522	150	459788
151	460043	152	460081	153	460085
154	460120	155	460187	156	460240
157	460256	158	460274	159	460387
160	460394	161	460401	162	460556
163	460557	164	460591	165	460592
166	460634	167	460642	168	460668
169	460677	170	460711	171	460713
172	460743	173	460765	174	460766
175	460770	176	460793	177	460817
178	466887	179	466888	180	466890
181	466894	182	467045	183	467904

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184	468044	185	468323	186	468324
187	468641	188	468736	189	468994
190	469056	191	469059	192	469078
193	469103	194	469106	195	469107
196	469108	197	469109	198	469355
199	469496	200	469517	201	469612
202	469623	203	469624	204	469626
205	470051	206	470052	207	470053
208	470054	209	470236	210	470447
211	470448	212	470476	213	470570
214	470571	215	471024	216	471191
217	471238	218	471239	219	471240
220	472066	221	472399	222	472462
223	472980	224	473213	225	473224
226	473484	227	473927	228	473996
229	473997	230	473998	231	473999
232	474119	233	474139	234	474145
235	474146	236	474147	237	474496
238	474674	239	474963	240	474964
241	475341	242	475342	243	477547
244	477564	245	477570	246	477660
247	477711	248	477712	249	477805

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250	477955	251	478044	252	478107
253	478544	254	478633	255	478767
256	478794	257	478858	258	478864
259	478908	260	479042	261	479215
262	479216	263	479217	264	479374
265	479375	266	479414	267	479523
268	479524	269	479667	270	480059
271	480060	272	480383	273	480392
274	480740	275	481074	276	482573
277	482574	278	482857	279	483054
280	483169	281	483174	282	483269
283	483980	284	484275	285	484276
286	484858	287	484865	288	485282
289	485283	290	485507	291	485775
292	486258	293	486259	294	486265
295	486266	296	486297	297	487155
298	487397	299	487408	300	487410
301	487411	302	487428	303	487506
304	487516	305	487526	306	487536
307	487546	308	487556	309	487565
310	487649	311	487851	312	487895
313	487980	314	487981	315	487982

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316	487984	317	488032	318	488058
319	488378	320	488383	321	488436
322	488438	323	488439	324	488619
325	488620	326	498002	327	511491
328	485773	329	113329		

5. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. The attached Appendix provides clear evidence that such conflicting claims exist between the 329 related co-pending applications identified above. However, an analysis of all claims in the 329 related co-pending applications would be an extreme burden on the Office requiring millions of claim comparisons.

In order to resolve the conflict between applications, applicant is required to either:

- (1) file terminal disclaimers in each of the related 329 applications terminally disclaiming each of the other 329 applications, or;
- (2) provide an affidavit attesting to the fact that all claims in the 329 applications have been reviewed by applicant and that no conflicting claims exists between the applications. Applicant should provide all relevant factual information including the specific steps taken to insure that no conflicting claims exist between the applications, or;
- (3) resolve all conflicts between claims in the above identified 329 applications by identifying how all the claims in the instant application are distinct and separate inventions from all the claims

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in the above identified 329 applications (note: the five examples in the attached Appendix are merely illustrative of the overall problem. Only correcting the five identified conflicts would not satisfy the requirement).

Failure to comply with the above requirement will result in abandonment of the application.

INFORMATION DISCLOSURE STATEMENTS

6. Receipt is acknowledged of applicant's Information Disclosure Statements filed 12/11/95, 12/22/95, 4/17/96, and 4/7/97. In view of the unusually large number of references cited in the instant application (approximately 2,200 originally and 645 in the subsequent IDS) and the failure of applicant to point out why such a large number of references is warranted, these references have been considered in accordance with 37 C.F.R. 1.97 and 1.98 to the best ability by the examiner with the time and resources available.

The foreign language references cited therein where there is no statement of relevance or no translation are not in compliance with 37 C.F.R. 1.98 and have not been considered. Numerous references listed in the IDS are subsequent to applicant's latest effective filing date of 9/11/87, therefore, the relevancy of these references is unclear. Also cited are numerous references that are apparently unrelated to the subject matter of the instant invention such as: US Patent # 33,189 directed toward a beehive, GB 1565319 directed toward a chemical compound, a cover sheet with only the word "ZING", a computer printout from a library search with the words "LST" on it and a page of business cards including that of co-inventor James Cuddihy, among others. The relevancy of these references cannot be ascertained. Furthermore, there are several

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database search results listed in foreign languages (such as German) which list only the title and document information; no copy has been provided, therefore, these references have not been considered.

CLAIM REJECTIONS - 35 USC § 112

7. Claims 2-55 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is noted that, under section 112-2, a method claim must be drafted so as to positively recite the steps which comprise the method. Being such, it is maintained that the recitation “on the basis of a plurality of comparisons” in line 14 of claim 2 fails to conform to the required format of a method claim in that it implies that the recited method comprises a plurality of comparison steps yet, as currently drafted, claim 2 fails to positively recite said comparison steps. Similarly, the recitation “outputting selected other portions of said message stream” in line 15 of claim 2 also fails to conform to the required format of a method claim in that it implies that the recited method comprises a step for “selecting other portions of said message stream” yet, as currently drafted, claim 2 also fails to positively recite this step. Such clarifications are needed throughout the pending claims.

Line 13 of claim 2 includes the following alternative expression: “determining the length or format of at least one segment”. The examiner maintains that it is unclear from applicant’s

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original disclosure how the term "length" and the term "format" have been used to define different disclosed functions of the alleged invention (i.e. the term "format" actually appears to be inclusive of the term "length" taken in the context of the claim). If the two terms actually refer to the same thing when referenced back to applicant's original disclosure, then the use of the alternative "or" adds nothing but confusion to the claim. Clarification is required.

Line 20 of claim 2 includes the following alternative expression: "availability, use or usage". The examiner maintains that it is unclear from applicant's original disclosure how the terms "availability", "use" and "usage" have been used to define different disclosed functions of the alleged invention. If any two of terms "availability", "use" and "usage" actually have the same meaning when referenced back to applicant's original disclosure, then the use of the alternative "or" adds nothing but confusion to the claim.

Claim 3 is confusing and indefinite because the preamble of the claim is directed to a method "of processing signals at a receiver station" while the body of the claim only recites processing steps which occur at "a transmission station". Clarification is required.

The examiner notes that the term "information transmission" appears to have been used by applicant in order to refer to a transmission which contains both programming and a message stream (note lines 4 and 5 of claim 2). Being such, lines 3-8 of claim 3 are confusing and indefinite because it is not clear how an "information stream", e.g. which contains the message stream by definition, can be received (note line 2) at a transmission station prior to the generation and transmission of the message stream by said transmission station. Alternatively, the meaning/definition of the recited terminology "information stream" as defined/used in applicant's original disclosure is not understood. Clarification is required.

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In claim 4, line 15, "said at least a first message" is confusing and is indefinite because it has multiple antecedent basis when referenced back to the recitation of "at least a first message" in lines 4-5 of claim 4 and the recitation of "at least a first message" in lines 9-10 of claim 4. Similar clarification is needed for the recitation "said at least a first message" which appears in lines 12 and 13 of claim 4.

In claim 4, line 12, "said television programming" has multiple antecedent basis and is indefinite (note the recitation of "television programming" in line 6 and in line 11 of claim 4).

In claim 4, the recitations of lines 14 and 15 are confusing and indefinite when referenced back to the recitations of lines 3-13 because the recitations of lines 14 and 15 appear to required the operation of lines 4-8 to be carried out yet, in clear conflict, the recitations of lines 3-13 suggest that the operation of lines 4-8 only represents an alternative mode of operation (note the term "or" in line 8 of claim 4). Clarification is required.

Applicant is asked to review all of the claims and to correct any section 112-2 problems which are similar to those exemplified above.

8. Claims 2 and 5-40 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the

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art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

I. Applicant has now presented claims which are directed to the distribution of “digital television signals”. The following is noted:

As originally filed, applicant’s disclosure lacks any specific description: a) as to how the recited “digital television signals” of applicant’s alleged invention(s) were formatted for transmission, over a television distribution system, *using the method(s) that are now recited in the pending claims*; and b) as to how the transmission circuitry of applicant’s used to carry out said recited method(s) was specifically modified and/or configured for the purpose of handling “digital television signals” *in the manner that is now recited in the pending claims*. Apparent justification for not having provided such details in his original disclosure appears to be based: 1) on applicant’s allegation that the transmission of “digital television signals”, comprised of *digital video* and *digital audio*, was well known to those skilled in the art at the time of applicant’s alleged invention [for example, see lines 30-33 on page 288 of applicant’s disclosure]; and 2) on applicant’s assumption that the means required to transmit digitally formatted television signals were the same as, and/or were at least interchangeable with, the means conventionally used to transmit

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analog television signals¹. The examiner maintains that, at the time of applicant's alleged invention, these allegations and assumptions appear to have been erroneous.

The examiner emphasizes that he does not dispute the fact that it was well known in the art to have broadcasted digitally formatted television signals under those "rare" circumstances in which sufficient bandwidth was available for, and could be devoted to, the transmission of such digital television signals. However, the examiner maintains that such circumstances were in fact "rare" because of the extremely large bandwidth that was required to transmit such digital television signals even when the said signals had been compressed using state of the art bandwidth reduction techniques²; i.e. such a compressed

¹ For example, applicant's original disclosure described portions of the circuitry of applicant's alleged invention(s) as having operated to transmit digitally formatted TV signals over a cable TV channel during a first period of time and as having then operated to transmit analog TV signals over the same cable TV channel during a subsequent period of time [note lines 1-5 on page 302 of applicant's disclosure]. No discussion as to any difference in the required handling of these two different television signals was ever provided, suggested, or recognized via applicant's original disclosure.

² Support for the examiner's position is provided via the following showing:

1) the publication "Digital Television Transmission With 34 Mbit/s" by Burkhardt et al. evidences a conventional transmission system in which a TV signal was broadcast in using digital signal format [see figure 3]. Even though the bandwidth of the digital TV signal was compressed prior to transmission, said system still required a 22 MHZ channel to carry said digital signal [see the second full paragraph under the heading "Bit-Rate Reduction" on page 244]; i.e. wherein 22 MHZ bandwidth is almost 4X that of a standard 6MHz analog TV channel.

2) U.S. Patent No. 3,755,624 to Sekimoto also evidences a conventional system in which a TV signal was digitally formatted and bandwidth compressed prior to being broadcast. The bit-rate of this compressed digital TV signal was 32 Mbit/s which required a bandwidth more than 3X that of said standard analog TV channel

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digital signal still required a transmission bandwidth which was many times larger than that required by its analog counterpart. Because of this large difference in bandwidth requirements, the means conventionally used to transmit digitally formatted television signals were not the same, and/or were interchangeable with, the means conventionally used to transmit analog television signal; i.e. contrary to applicant's erroneous assumptions.

Given the above, the examiner maintains that the descriptions found in applicant's original disclosure pertaining to the transmission of digitally formatted television signals were, at best, confusing. More specifically, as shown above, it is maintained that the bandwidth that was conventionally required to transmit "digital television signals" was many times greater than the bandwidth that was required to transmit analog TV signals and thus the process of transmitting digital television signals through a transmission given medium was not equivalent to, and was not interchangeable with, the process used to transmit said same television signals through said same medium in an analog signal format; i.e. applicant's original disclosure at least failed to disclose or describe the digital signal format which enabled the transmission of digitally formatted television signals in the manner that was disclosed by applicant.

[note lines 10-13 of column 30].

3) U.S. Patent No. 4,742,543 to Frederiksen illustrated a system in which a digitized TV signal was processed on the transmitter side digitally [see figure 1]. However, the Frederiksen system converted the TV signal into an analog signal format (@33) prior to broadcasting the signal. Such a signal conversion was described as having been necessary because the standard analog TV channel that was used to transmit the signal did not have enough bandwidth to carry TV signal if left in its digital signal format [note lines 18-23 of column 5].

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In response to this Office action, applicant is requested to submit evidence (e.g. a U.S. Patent or a printed publication) which supports the allegations and assumptions of applicant's original, thereby showing that the means needed to format and transmit "digital television signals" in a manner that was compatible with the methods described and claimed by applicant were in fact well known to those skilled in the art at the time of applicant's alleged invention. Clarification is required.

II. The examiner maintains that even those sections of applicant's original disclosure which were allegedly devoted to the handling and transmission of digital television signals, e.g. note "Example #7" which begins on page 288 of applicant's disclosure, provide no clues as to how such digital television signals were actually handled and transmitted by applicant's alleged invention. For example, such descriptions fail to explain: 1) how the digital television signals of applicant's alleged invention were formatted and/or compressed in order to have allowed them to be handled via conventional TV broadcast circuitry; 2) how the digital television signals of applicant's alleged invention were formatted and/or compressed so that they could be transmitted over the same TV channel that was used to carry conventional analog TV broadcasts [see lines 1-5 on page 302 of applicant's disclosure]; 3) how the headend stations of applicant's alleged invention were modified in order to have handled/processed said digitally formatted television signals; 4) how the digital "SPAM" messages of applicant's alleged invention were embedded within digitally formatted television signals, how said "SPAM" messages were carried by said digitally formatted

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television signals, and how said "SPAM" messages were extracted from said digitally formatted television signals; 5) how the bit-rate of "SPAM" messages that were carried in the digitally formatted television signals related to the bit-rate that was used to transmit the data of the digitally formatted signals and how it was related to the bit-rate of the "SPAM" messages that were carried in the analog TV signal transmissions [e.g. because of the apparent difference in bandwidth requirements between analog and digital television transmissions, it would appear that the bit-rate of the "SPAM" messages contained in the digital TV signals would be different from the bit-rate of the "SPAM" messages carried in the analog TV signals and, if so, it is not clear how the digital decoders of applicant's alleged could have recognized and handled such differences]; etc...

III. For the reasons set forth in parts "I" and "II" of this paragraph, the examiner maintains that the pending claims which are directed to the handling/transmission of "digital television signals" were not enabled by applicant's original disclosure. The examiner maintains that said pending claims represented an "invitation to experimentation" when viewed in light of the state of the "digital television signal" transmission prior art which actually existed at the time of applicant's alleged invention and when viewed in light of the allegations and assumption on which applicant's own disclosure was apparently based. Clarification is required.

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9. Claims 2-55 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

37 C.F.R. 1.75(d)(1) requires that:

“the terms and the phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description”.

The following limitations were not supported by the specification as originally filed:

The examiner notes that throughout the claims, applicant has elected to use the expression “at least one”; i.e. a positive recitation. The examiner maintains that, in order to have support for the use of this positive recitation, the original disclosure must have described circumstances in which only one of said “at least one” was used and must have also described circumstances in which more than one of said “at least one...” was used. For example:

- 1) Lines 11 and 12 of claim 2 state that selected control information is communicated to “at least one register memory”. To show that the original disclosure provided adequate support for this recitation, it is maintained that applicant must show where the original disclosure described circumstances the recited method communicated said selected control information only to one register memory, and must also show where the original disclosure described circumstances in which the recited method communicated said selected control information to more than one register memory. For example, if the

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original disclosure only described a system which comprised three register memories, then the recitation "at least one" is not supported by said disclosure: e.g. "at least three register memories" were required. Clarification/correction is needed (i.e. if such alternative descriptions cannot be found, then support for the term the term "at least one" does not exist and said term "at least one" must be deleted from the claim). Such is true for all recitations in which the term "at least one" appears.

2) Lines 13 and 14 of claim 2 go on to recite that the "length or format" of "at least one segment" is determined on the basis of a plurality of comparisons at "said at least one register memory". Given the recitations of lines 11 and 12, it is maintained that applicant must further show where the original disclosure described circumstances in which the recited method provided each of the following steps and all of the recited alternatives: a) a step for communicating the selected control information to only one register memory wherein a plurality of comparisons are made at said one register memory in order to determine the length (and, alternatively, to determine the format) of only one (and, alternatively, of more than one) selected segment; and b) a step for communicating the selected control information to more than one register memory wherein a plurality of comparisons are made at said more than one register memory in order to determine the length (and, alternatively, to determine the format) of only one (and, alternatively, of more than one) selected segment.

Clarification of the above is required.

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With respect to claim 2, it is not clear where the original disclosure provided clear support or antecedent basis for the following terminology: a) an “*information transmission*” comprised of a “*digital television signal*” and a “*message stream*”; b) “*one message*” which is selected from a message stream of an information transmission comprised of a digital television signal and said message stream; c) “*at least a first portion of the selected one message*” which is inputted to a control processor; d) “*control information*” which is in said inputted at least a first portion of said selected one message; e) “*at least one segment of said message stream*” which is determined on the basis of a plurality of comparisons at least one register; f) “*selected other portions of said message stream*” which are outputted to a plurality of processors.

For reasons set forth in paragraph 8 of this Office action, the meaning of the term “digital television signal” as it appears in claim 2 is still not understood. For example: Does the term refer to a digital television signal which represents a full motion television program?; Does the term refer to a digital television signal which represents still frame television programming; Does the term refer to some other kind of digital programming?; etc... Clarification is still required.

With respect to claim 2, it is not clear where applicant’s original disclosure described all of the positively recited alternative methods of processing signals at a receiver station. More specifically, clarification is needed to show where applicant’s original disclosure described a method which comprised steps: in which the availability (and, alternatively, the use; and, alternatively, the usage) of a television program (and, alternatively, of a message stream) was metered (and, alternatively, was monitored); in which the reception (and, alternatively, the

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presentation) of said television programming was controlled in accordance with said message stream; in which “selected other portions” of said message stream were outputted to said plurality of processors of the receiver station and were processed simultaneously; in which the length (and, alternatively, the format) of only one segment of said message stream (and, alternatively, of more than said one segment) was determined based on a plurality of comparisons made at only one register (and, alternatively, made at a plurality of registers); in which only a first portion of a selected message was inputted to a control processor (and, alternatively, in which more than said first portion of a selected message was inputted to said control processor); in which control information was selected in said first portion of said selected message (and, alternatively, was selected in more than said first portion of said selected message stream); and in which the selected control information was communicated to a single register memory (and, alternatively, was communicated to more than said single register memory).

The examiner notes that claims 5-40 require clarifications similar those cited above for claim

2. Specifically, clarification is needed to show where the original disclosure described the methods comprised of each of the steps recited in claims 5-40 (i.e. and their alternatives).

Clarification is needed.

With respect to claim 3, clarification is needed to show where the original disclosure provided clear support or antecedent basis for the terms “message stream” and “television programming” as recited in the context of the claim 3.

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With respect to claim 48, it is not clear where applicant's original disclosure described the recited "message stream": a) which was effective to control the reception or presentation of television programming (see claim 3); b) which was effective to meter or monitor the availability, use or usage of said television programming or of said message stream (see claim 3); and c) which was also comprised of at least some portion of said television programming whose reception or presentation it controlled and whose availability, use or usage it monitored or metered (see claim 48).

As used in the context of claim 4, it is not clear where applicant's original disclosure provided clear support or antecedent basis for the recitations of an "information transmission", an "instruct signal", "at least a first message"; and a transmitter control signal". Clarification is required.

With respect to claim 4, it is not clear where the original disclosure described a method: a) in which a received information transmission, a received instruct signal, and a received transmitter control signal were all transmitted; b) in which the received "control signal" was used at a transmitter station to control the communication of a first message to a transmitter (and, alternatively, to control the communication of more than said first message to the transmitter); and c) in which the received instruct signal was effective to perform the recitations of lines 4-8 or to perform the recitations of 9-13.

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With respect to claim 4, it is not clear where applicant's original disclosure described a method in which a received instruct signal was effective to control a first receiver station to generate a first message signal (and, alternatively, to generate more than said first message signal) wherein the generated signal(s) were used to control the reception (and, alternatively, to control the presentation) of television programming at a second receiver station. Clarification is required.

CLAIM REJECTIONS - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

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11. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brennand et al. [US Patent No. 4,744,080] in view of Drury et al. [US Patent No. 4,636,851].

I. The showing of Drury et al.:

Drury et al. has been cited for the following reasons:

- a) In figure 1, Drury et al illustrates the active line format of a television signal formatted according to the MAC (Multiplexed Analog Component) standard as having included TDM multiplexed analog video components ("2" and "3") and digital service components ("1");
- b) Drury et al at least evidenced the obviousness of having digitally transmitted all of the components of a MAC television signal digitally; i.e. including said video components which were "normally" transmitted in an analog format [note: the output of buffer "16" of figure 4; and lines 44-47 of column 3].

II. The showing of Brennand et al.:

The Brennand et al. disclosure is directed circuitry which operated at a "receiver station" to receive and process conventional MAC (Multiplexed Analog Component) television signal broadcasts which, as was illustrated in figure 1 of Drury et al, comprised TDM multiplexed video signal components and digital service components. The digital service components comprised packets which contained control information and packets which contained service information [note lines 11-17 of column 4]. The service information represented a wide variety of available services including audio services, radio services, encryption services, teletext services, telesoftware services, etc, ... [note: lines 38-41 of

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column 2; and lines 34-49 of column 4]. The control information represented all the data that was needed in the recovery of one or more of the services including service identification information, descrambling codes, data format information, etc,... [note: lines 11-14 of column 4; lines 53-68 of column 4; and lines 63-68 of column 7]. The circuitry disclosed by Brennand et al. comprised:

- a) a plurality of processors (illustrated as elements 26A-26C and 27 of figure 2) each of which receives and simultaneously processes at least one portion of the service information that pertains to a user selected digital service [note: lines 35-40 of column 2; lines 28-34 of column 4; lines 3-8 of column 5; etc,...];
- b) means, not shown in the figures, *for receiving* broadcasted MAC television signals (i.e. the recited “*information transmission*”) which includes said video signal components and said digital service component (i.e. the recited “*message stream*”);
- c) means, including a demodulating circuit (not shown in the figures) and a slicing circuit (“3” of figure 1), *for detecting* the digital service component of the received MAC signals and for supplying said service component as a serial bit stream to transmission line “7” of figure 1;
- d) user input means, not shown in figure 1, by which a user controls MPU device “23” in *selecting* at least the desired one of the available digital services (i.e. the recited “one message”)[note: lines 61-63 of column 1; and lines 53-57 of column 4];

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- e) means, including element “43” of figure 4, for *inputting* at least a first portion of the selected digital service (i.e. at least the “*relevant*” BI packets) to a control processor that is comprised of elements “22” and “23” of figure 1, wherein said inputted portion contains selected control information (i.e. such as information that identifies the coding scheme used to code the service information) [note: lines 13-19 of column 2; lines 10-14 of column 4; and lines 57-68 of column 4];
- f) means, e.g. “23” of figure 1, for *communicating* said selected control information to a memory (i.e. element 24 of figure 1)[note lines 5-11 of column 7];
- g) means for determining the format (i.e. the coding scheme, sampling frequency, etc,...) of segments of said service information based on the selected control information stored in said memory [note lines 13-19 of column 2; lines 10-14 of column 4; lines 57-68 of column 4; and lines 63-68 of column 7];
- h) means, “9” of figure 1, for controlling the presentation of television programming in accordance with information contained within said service component (i.e. “IW2”); and
- I) means, processor “23”, which at least monitors the “availability” of television programming and/or digital services within the received broadcast [e.g. it detects the presence of programs and services which a given user is authorized to access].

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III. Differences:

Claim 2 differs from Brennand et al. only in that claim 2 recites: a) that the information transmission comprises a “digital television signal”; 2) that the memory which stores the selected control information comprises a “register” memory; 3) that the format of the recited “at least one segment” is determined by a plurality of comparisons at said register memory.

IV. Obviousness:

A) As evidenced by Drury et al., the examiner maintains that it would have been obvious to one skilled in the art for the analog video components in Brennand et al. To have been transmitted digitally provided that a digital transmission medium of sufficient bandwidth was available.

B) In Brennand et al., the memory which stored the selected control information was identified as a RAM. The examiner maintains that such a RAM was inherently comprised of registers and therefore clearly falls within the scope of the recited “register memory”.

C) The examiner notes that the MPU “23” in the system disclosed by Brennand et al. was required to have identified the meaning of the selected control information that was stored in RAM “24” so as to generate the control signals that were required to control the operation of the plurality of processors according to the format of the service information [note lines 63-68 of column 7]. In order to have determined the meaning of the stored control information, it is maintained that it would at least have been obvious to one skilled in the art (i.e. if not inherent) for the stored control signals to have been compared

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with known signals having known meaning such that, when a match was detected, the meaning of the stored control information was determined.

12. Claims 5-7, 19-25, 32, 33, 37, 39, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brennand et al. [US Patent No. 4,744,080] in view of Drury et al. [US Patent No. 4,636,851].

A) see paragraph 11 of this Office action.

B) Note lines 24-27 of column 4; lines 40-52 of column 5, and elements "56" and "57" in figure 5 of Brennand et al.

13. Claim 10, 13, 14, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brennand et al. [US Patent No. 4,744,080] in view of Drury et al. [US Patent No. 4,636,851], as was set forth in paragraph 11 of this Office action, further in view of Vigarie et al. [US Patent No. 4,748,619].

A) See paragraph 11 of this Office action.

B) The examiner maintains that it would have been obvious to one skilled in the art to have further modified Brennand et al. with the demux circuitry (i.e. switches) illustrated in figure 2 of Vigarie et al. in order to have reduced the number of pins required to implementing the circuitry on an IC chip.

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14. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Block et al. [US Patent No. 4,225,884].

As shown in figures 3 and 4, Block et al. disclosed access control and billing circuitry which was to have been used within a subscription television system. The circuitry comprised: a) a receiver station (figure 4) which comprised a plurality of processors (60,62); a central transmitter station (figure 3); means for generating a message stream [see lines 20-36 of column 4]; and means (54) for transmitting said message stream.

Claim 3 differs from Block et al. only in that claim 3 recites that the transmitter station receives an "information transmission".

The examiner takes official notice that it was notoriously well known in the art to have used access control and billing circuitry, of the type disclosed by Block et al., in order to have controlled access and billing of programming broadcasted from a CATV headend. Being such, the examiner maintains that it would have been obvious to one skilled in the art for the transmitter station in Block et al. to have comprised such a conventional CATV headend. Such CATV headends inherently operated to receive and retransmit received "information transmissions" (i.e., such as regular broadcasts from local broadcast stations).

15. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brennand et al. [US Patent No. 4,744,080] in view of Murray [US Patent #4,706,109].

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- A) Brennand et al. disclosed a system as was set forth in paragraph 11 of this Office action.
- B) Claim 3 differs from the showing of Brennand et al. only in that claim 3 is directed to the transmitter side of the television transmission system; i.e. Brennand et al. does not describe the process by which MAC television signals are formatted for transmission.
- C) Murray has been cited because it illustrates the transmitter side of a MAC television transmission system. As shown in figure 3, Murray illustrates that the transmitter side of a conventional MAC system comprised: a) means (2) for receiving an information transmission comprised of the analog video signal components; b) means (22) for receiving a message stream comprised of the digital services; and c) means (7) for transmitting the information transmission and the message stream as a MAC signal.
- D) The examiner maintains that it would have been obvious to one skilled in the art to for the broadcasted MAC signal described in Brennand et al. to have been generated using the conventional transmitter structure described in Murray.

16. Claims 41-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brennand et al. [US Patent No. 4,744,080] in view of Murray [US Patent #4,706,109] for the reasons that were set forth in paragraph 15 of this Office action.

- A) As was discussed above, the digital service data transmitted in Brennand et al. included the recited control/instruct/message signals such as: control signals which identified the format of the data being transmitted [lines 63-68 of column 7]; control signals which cause

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programmable MPUs located within the plural processors to execute specific control software [note: lines 45-62 of column 7; and lines 66-68 of column 7]; etc, ...

17. The examiner notes that the art of record has been applied to the claims to the extent of the examiner's understanding in view of the section 112 problem cited above.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David E. Harvey whose telephone number is (703) 305-4365.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

DEH 3/16/98

Andrew Faile
ANDREW I. FAILE
SUPERVISORY PATENT EXAMINER
GROUP 2700

APPENDIX

(Examples of Claim Conflicts between Applications)

Comparison of claim 12 from Serial No. 08/469,626 to claim 24 from Serial No. 08/487,980.

Claim 12

A method of controlling a remote intermediate mass medium programming transmitter station to communicate mass medium program material to one or more receiver stations, with said remote transmitter station including a broadcast or cablecast transmitter for transmitting one or more units of mass medium programming, a plurality of selective transmission devices each operatively connected to said broadcast or cablecast transmitter for communicating a unit of mass medium programming, a mass medium programming receiver, a control signal detector, and a controller or computer capable of controlling one or more of said selective transmission devices, and with said remote transmitter station adapted to detect the presence of one or more control signals, to control the communication of specific units of mass medium programming in response to detected specific

Claim 24

A method of controlling a remote intermediate mass medium programming transmitter station to communicate mass medium program material to one or more receiver stations, with said remote transmitter station including a broadcast or cablecast transmitter for transmitting one or more units of mass medium programming, a plurality of selective transmission devices each operatively connected to said broadcast or cablecast transmitter for communicating a unit of mass medium programming, a mass medium programming receiver, a control signal detector, and a controller or computer capable of controlling one or more of said selective transmission devices, and with said remote transmitter station adapted to detect the presence of one or more control signals, to control the communication of specific units of mass medium programming in response to detected specific

control signals, and to deliver at its broadcast or cablecast transmitter one or more units of mass medium program, said method of communicating comprising the steps of:

(1) receiving a unit of mass medium programming to be transmitted by the remote intermediate mass medium programming transmitter station and delivering said unit of mass medium programming to a transmitter, said unit of mass medium programming having an instruct signal which is effective at the one or more receiver stations to *control a sequence of events*;

(2) receiving one or more control signals which at the remote intermediate mass medium programming transmitter station operate to control the communication of said unit of mass medium programming; and

(3) transmitting said one or more control signals to said

control signals, and to deliver at its broadcast or cablecast transmitter one or more units of mass medium program, said method of communicating comprising the steps of:

(1) receiving a unit of mass medium programming to be transmitted by the remote intermediate mass medium programming transmitter station and delivering said unit of mass medium programming to a transmitter, said unit of mass medium programming having an instruct signal which is effective at the one or more receiver stations to *decode a portion of a multichannel broadcast or cablecast transmission*;

(2) receiving one or more control signals which at the remote intermediate mass medium programming transmitter station operate to control the communication of said unit of mass medium programming; and

(3) transmitting said one or more control signals to said

transmitter before a specific time.

transmitter before a specific time.

Comparison of claim 24 from Serial No. 08/488,620 to claim 23 from Serial No. 08/477,660.

Claim 24

A method of controlling a computer to communicate a television signal in a television network, said network *having* a television transmitter station and a television receiver station, said receiver station having a computer for communicating of television signals, said method comprising the steps of:

programming *said receiver station* to search for data embedded in a television signal;

inputting an identifier code that designates a unit of computer software;

storing a television signal on a file storage medium at a storage device associated with said computer;

receiving from a remote source an information transmission that contains a control signal;

Claim 23

A method of controlling a computer to communicate a television signal in a television network, said network *comprised of* a television transmitter station and a television receiver station, said receiver station having a computer for communicating of television signals, said method comprising the steps of:

programming *a processor* to search for data embedded in a television signal;

inputting an identifier code that designates a unit of computer software;

storing a television signal on a file storage medium at a storage device associated with said computer;

receiving from a remote source an information transmission that contains a control signal;

selecting a storage location associated with said computer in response to said control signal;

transferring said unit of computer software to said storage device;

storing said unit of software on said file storage medium;

executing a technique for communicating a file stored on a disk associated with a computer; and

communicating said television signal in accordance with said technique.

selecting a storage location associated with said computer in response to said control signal;

transferring said unit of computer software to said storage device *and*

storing said unit of software on said file storage medium,

thereby to enable said computer to execute a technique for communication a file stored on a disk associated with a computer and

communicate said television signal in accordance with said technique.

Comparison of claim 23 from Serial No. 08/488,032 to claim 58 from Serial No. 08/451,746.

Claim 23

A method of communicating subscriber station information from a subscriber station to one or more remote data collection stations, said method comprising the steps of:

(1) inputting a viewer's or participant's reaction at a subscriber station;

(2) receiving at said subscriber station information that designates an instruct signal to process or an output to deliver in consequence of subscriber input;

(3) determining the presence of said subscriber input at said subscriber station by processing said viewer's or participant's reaction;

(4) processing an instruct signal which is effective to *coordinate data processing with communication or presentation of television programming at said*

Claim 58

A method of communicating subscriber station information from a subscriber station to one or more remote data collection stations, said method comprising the steps of:

(1) inputting a viewer's or participant's reaction at a subscriber station;

(2) receiving at said subscriber station information that designates an instruct signal to process or an output to deliver in consequence of *said specific* subscriber input;

(3) determining the presence of said *specific* subscriber input at said subscriber station by processing said viewer's or participant's reaction;

(4) processing an instruct signal which is effective to *receive, generate, or present output to supplement television*

subscriber station in consequence of said step of determining; and

(5) transferring from said subscriber station to one or more remote data collection stations an indicia confirming delivery of said instruct signal from said step of processing or confirming delivery of said effect from said step of processing.

programming at said subscriber station in consequence of said step of determining; and

(5) transferring from said subscriber station to one or more remote data collection stations an indicia confirming delivery of said instruct signal from said step of processing or confirming delivery of said effect from said step of processing.

Comparison of claim 47 from Serial No. 08/469,106 to claim 46 from Serial No. 08/487,649.

Claim 47

A method of controlling at least one of a plurality of receiver stations each of which includes a broadcast or cablecast mass medium program receiver, at least one output device, a control signal detector, at least one processor capable of responding to an instruct signal, and with each said mass medium program receiver station adapted to detect and respond to one or more instruct signals, said method of communicating comprising the steps of:

(1) receiving at a broadcast or cablecast transmitter station an instruct signal which is effective at the receiver station to *implement a scheme for generating a control signal* and delivering the instruct signal to a transmitter;

(2) receiving at said transmitter station one or more

Claim 46

A method of controlling at least one of a plurality of receiver stations each of which includes a broadcast or cablecast mass medium program receiver, at least one output device, a control signal detector, at least one processor capable of responding to an instruct signal, and with each said mass medium program receiver station adapted to detect and respond to one or more instruct signals, said method of communicating comprising the steps of:

(1) receiving at a broadcast or cablecast transmitter station an instruct signal which is effective at the receiver station to *select a broadcast or cablecast signalling scheme and generate a signal in consequence of said selected broadcast or cablecast signalling scheme* and delivering the instruct signal to a transmitter;

(2) receiving at said

control signals which at the receiver station operate to communicate the instruct signal to a specific processor; and

(3) transferring said one or more control signals to the transmitter, said transmitter transmitting the instruct signal and the one or more control signals.

transmitter station one or more control signals which at the receiver station operate to communicate the instruct signal to a specific processor; and

(3) transferring said one or more control signals to the transmitter, said transmitter transmitting the instruct signal and the one or more control signals.

Comparison of claim 11 from Serial No. 08/477,805 to claim 25 from Serial No. 08/449,523.

Claim 11

A method of controlling a remote television transmitter station to communicate television program material to one or more receiver stations, with said remote television transmitter station including a broadcast or cablecast transmitter for transmitting one or more units of television programming, a plurality of selective transmission devices each operatively connected to said broadcast or cablecast transmitter for communicating a unit of television programming, a television receiver, a control signal detector, and a controller or computer capable of controlling one or more of said selective transmission devices, and with said remote transmitter station adapted to detect the presence of one or more control signals, to control the communication of specific units of television programming in response to detected specific control signals, and to deliver at

Claim 25

A method of controlling a remote television transmitter station to communicate television program material to one or more receiver stations, with said remote television transmitter station including a broadcast or cablecast transmitter for transmitting one or more units of television programming, a plurality of selective transmission devices each operatively connected to said broadcast or cablecast transmitter for communicating a unit of television programming, a television receiver, a control signal detector, and a controller or computer capable of controlling one or more of said selective transmission devices, and with said remote transmitter station adapted to detect the presence of one or more control signals, to control the communication of specific units of television programming in response to detected specific control signals, and to deliver at

its broadcast or cablecast transmitter one or more units of television programming, said method of communicating comprising the steps of:

(1) receiving a unit of television programming to be transmitted by the remote intermediate television transmitter station and delivering said unit of television programming to a transmitter;

(2) receiving one or more control signals which at the remote intermediate television transmitter station operate to control the communication of *a specific one or more of said plurality of units* of television programming; and

(3) transmitting said one or more control signals to said transmitter before a specific time.

its broadcast or cablecast transmitter one or more units of television programming, said method of communicating comprising the steps of:

(1) receiving a unit of television programming to be transmitted by the remote intermediate television transmitter station and delivering said unit of television programming to a transmitter, *said unit of television programming having an instruct signal which is effective at the one or more receiver stations to implement a television signalling scheme*;

(2) receiving one or more control signals which at the remote intermediate television transmitter station operate to control the communication of *said unit* of television programming; and

(3) transmitting said one or more control signals to said transmitter before a specific time.